

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A medical needle shield apparatus comprising:

a needle hub having a needle cannula extending therefrom to a distal end;
and at least one shield being extensible from a retracted position to an extended position to enclose a distal end of the needle,

the shield including a binding member disposed within the shield and defining binding surfaces that form an aperture configured for slidable receipt of the needle between the retracted position and the extended position,

the binding member including at least one drag inducing member such that the at least one drag inducing member engages the needle during slidable receipt of the needle to create a drag force with the needle, the drag force and shield facilitating rotation of the binding member relative to a longitudinal axis of the needle such that the binding surfaces engage the needle to prevent slidable movement of the needle in the extended position of the shield,

the binding member further including a needle communicating surface extending therefrom such that the needle communicating surface is engageable with the needle to prevent rotation of the binding member,

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

a retainer for releasable engagement with the needle hub, and
the binding member further including a binding member reset surface
selectably alignable with a reset surface.

2. (Original) A medical needle shield apparatus as recited in claim 1,
wherein the at least one drag inducing member defines a cavity that is substantially
aligned with the aperture, the cavity being configured for slidable receipt of the
needle to create the drag force with the needle.

3. (Original) A medical needle shield apparatus as recited in claim 1,
wherein the binding member includes a substantially planar aperture plate that
includes the binding surfaces that form the aperture.

4. (Original) A medical needle shield apparatus as recited in claim 3,
wherein the at least one drag inducing member includes a pair of arms extending
from the aperture plate.

5. (Original) A medical needle shield apparatus as recited in claim 3,
wherein the arm includes a deflectable member.

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

6. (Original) A medical needle shield apparatus as recited in claim 1, wherein the binding member is rotatable, relative to a longitudinal axis of the inner needle, between a non-binding orientation whereby the inner needle is slidable relative to the binding member and a binding orientation whereby the binding surfaces engage the inner needle to prevent slidable movement of the inner needle in the extended position of the at least one shield.

7. (Original) A medical needle shield apparatus as recited in claim 1, wherein the shield includes a housing that defines at least one blocking member extending from a surface thereof, the at least one blocking member being engageable with the binding member for urging the binding member to a binding orientation.

8. (Original) A medical needle shield apparatus as recited in claim 3, wherein the shield includes a housing that defines at least one blocking member extending from a surface thereof, the aperture plate being axially movable for engagement with the at least one blocking member that causes rotation of the binding member to a binding orientation.

9. (Original) A medical needle shield apparatus as recited in claim 1, wherein the at least one shield is supported for relative rotational movement by at least one bearing.

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

10. (Original) A medical needle shield apparatus as recited in claim 1, wherein the needle is attached to a handle for manipulation thereof.

11. (Original) A medical needle shield apparatus as recited in claim 1, wherein the needle hub is releasably mountable with a housing of the at least one shield.

12. (Original) A medical needle shield apparatus as recited in claim 1, wherein the needle hub defines a hub slot that is configured to receive the retainer of the binding member.

13. (Original) A medical needle shield apparatus as recited in claim 1, wherein the binding member includes at least one outwardly arcuate arm that extends to the needle communicating surface.

14. (Original) A medical needle shield apparatus as recited in claim 1, further comprising a plurality of shields.

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

15. (Original) A medical needle shield apparatus as recited in claim 1, wherein said binding member reset surface comprises the distal facing surface of said retainer.

16. (Original) A medical needle shield apparatus as recited in claim 1, wherein said reset surface is configured to deflect said binding member reset surface to facilitate rotation of the binding member relative to said longitudinal axis such that said binding surface disengages the inner needle.

17. (Original) A medical needle shield according to claim 1, wherein said medical needle is adapted for bone biopsy.

18. (Original) A medical needle shield apparatus as recited in claim 1, wherein said reset surface is separate from said hub and urged by a spring toward said binding member reset surface.

19. (Original) A medical needle shield apparatus of claim 18, further comprising a luer male taper configured with said hub.

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

20. (Original) A medical needle shield according to claim 1, further comprising a protective needle sheath member.

21. (Original) A medical needle shield apparatus as recited in claim 1, wherein the shield includes a probe guide at a distal end thereof configured for receipt of an obturator, the obturator being configured for slidable movement with the needle cannula.

22. (Original) A medical needle shield according to claim 1, further comprising a retention element.

23. (Original) A medical needle shield according to claim 1, further comprising a guiding member for guiding through-the-needle devices.

24. (Original) A medical needle shield according to claim 1, further comprising a funnel for guiding an obturator.

25. (Original) A medical needle shield according to claim 1, further comprising detent disposed between the needle hub and the shield.

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

26. (Original) A medical needle shield according to claim 1, wherein said shield further comprises a flexible funnel.

27. (Original) A medical needle shield according to claim 1, wherein said shield comprises a depth stop.

28. (New) A medical needle assembly comprising:
a first medical needle apparatus comprising
a first medical needle having a proximal end opposite from a distal end,
a first shield on the first medical needle,
wherein the first shield is moveable from a retracted position to an extended position to sheath the distal end of the first medical needle; and
wherein the first shield can be reset to expose the distal end of the first medical needle after sheathing the distal end; and
a second device having a reset surface configured to engage the first medical needle apparatus to allow reuse of the first shield in a retracted position.

29. (New) The assembly of claim 28, wherein the first medical needle further comprises a first hub from which the proximal end of the first medical needle extends.

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

30. (New) The assembly of claim 29, wherein the second device is a second medical needle apparatus comprising a second hub from which a proximal end of a second medical needle extends, wherein the second medical needle terminates at a distal end.

31. (New) The assembly of claim 30, wherein the first hub has a first handle extending therefrom, wherein the second hub has a second handle extending therefrom, and wherein the first handle and the second handle fit together in a mated configuration to permit the first handle and the second handle to be simultaneously grasped.

32. (New) The assembly of claim 31, wherein the mated configuration permits the first handle and second handle to be temporarily secured together and to then be released from each other.

33. (New) The assembly of claim 30, wherein the first medical needle of the first medical needle apparatus slides within the second medical needle of the second medical needle apparatus.

34. (New) The assembly of claim 33, wherein the first medical needle is a stylet.

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

35. (New) The assembly of claim 33, wherein the first shield has a retention element to enable the first shield to be retained as the first medical needle moves within the second medical needle until the first shield is bound to the first medical needle.

36. (New) The assembly of claim 33, wherein the first shield has a retention element to enable the first shield and the first medical needle to move relative to each other until the first shield reaches the distal end of the first medical needle.

37. (New) The assembly of claim 33, wherein the second medical needle apparatus further comprises a second shield on the second medical needle, and wherein the first shield has a retention element to enable the first shield to be retained by the hub until the first medical needle is removed from the second medical needle to enable the first shield to be bound to the first medical needle.

38. (New) The assembly of claim 29, wherein the hub of the second medical needle apparatus further comprises a hub slot wherein the first medical needle apparatus further comprises a first binding member in the first shield, wherein the first binding member comprises a hub retainer configured to engage the hub slot to retain the hub to the first shield.

39. (New) The assembly of claim 28, wherein the reset surface of the second medical needle apparatus cooperates with a component in the first shield of the first medical needle apparatus to unlock the component so that the first shield can be moved

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

from an extended position with the distal end of the first medical needle sheathed to a retracted position on the first medical needle to expose the distal end of the first medical needle.

40. (New) The assembly of claim 39, wherein the component is a reset element of a binding member in the second shield and wherein the binding member is positioned on the second needle.

41. (New) The assembly of claim 29, further comprising a depth stop on the second medical needle.

42. (New) The assembly of claim 29, wherein the second medical needle apparatus further comprises a second shield on the second medical needle.

43. (New) The assembly of claim 42, wherein the second shield is configured to simultaneously sheath the distal end of the first medical needle and the distal end of the second medical needle when the first medical needle is positioned within the second medical needle and the assembly is ready for use.

44. (New) The assembly of claim 28, wherein the reset surface is a reset geometry which unlocks a reset element of the first medical needle apparatus.

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

45. (New) A medical needle assembly comprising:
- a first medical needle apparatus comprising
 - a first medical needle having a proximal end opposite from a distal end,
 - a first shield on the first medical needle,
 - wherein the first shield is moveable from a retracted position to an extended position to sheath the distal end of the first medical needle, and
 - wherein the first shield is configured to be reset to expose the distal end of the first medical needle after sheathing the distal end;
 - a second device having a reset surface configured to engage the first medical needle apparatus to allow reuse of the first shield in a retracted position;
 - wherein the second device has a component which cooperates with the first medical needle of the first medical needle apparatus in a sliding configuration.
46. (New) The assembly of claim 45, wherein the second device is a second medical needle apparatus comprising a hub from which a proximal end of a second medical needle extends, wherein the second medical needle terminates at a distal end.
47. (New) The assembly of claim 46, wherein the first medical needle apparatus comprises a first binding member on the first medical needle in the first

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

shield, and wherein the first binding member has a reset element which interacts with the reset surface of the hub.

48. (New) The assembly of claim 46, wherein the reset surface is a reset geometry which unlocks a reset element of the first medical needle apparatus.

49. (New) A medical needle assembly comprising:

a first medical needle apparatus comprising

a first medical needle having a proximal end opposite from a distal end,

a first hub from which the proximal end of the first medical needle extends,

a first shield on the first medical needle,

wherein the first shield is moveable from a retracted position to an extended position to sheath the distal end of the first medical needle, and

wherein the first shield can be reset to expose the distal end of the first medical needle after sheathing the distal end;

a second medical needle apparatus comprising

a second medical needle having a proximal end opposite from a distal end,

a second hub from which the proximal end of the second medical needle extends,

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

wherein the first medical needle of the first medical needle apparatus slides within the second medical needle of the second medical needle apparatus; and

an obturator device comprising an obturator extending from a handle,

wherein the obturator is sized to slide within and extend through the second medical needle to expel any contents in the second medical needle.

50. (New) The assembly of claim 49, wherein the first medical needle is a stylet.

51. (New) The assembly of claim 49, wherein the first medical needle apparatus further comprises a first binding member on the first medical needle in the first shield, and wherein the first binding member has a reset element which interacts with the reset surface located on the second hub.

52. (New) The assembly of claim 49, wherein the second medical needle apparatus further comprises a second binding member on the second medical needle in the second shield, and wherein the second binding member has a reset element.

53. (New) The assembly of claim 49, wherein the first hub has a first handle extending therefrom, wherein the second hub has a second handle extending

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

therefrom, and wherein the first handle and the second handle fit together in a mated configuration to permit the first handle and the second handle to be simultaneously grasped.

54. (New) The assembly of claim 33, wherein the mated configuration permits the first handle and second handle to be temporarily secured together and to then be released from each other.

55. (New) The assembly of claim 49, wherein the first shield has a retention element to enable the first shield to be retained as the first medical needle moves within the second medical needle until the first shield is bound to the first medical needle.

56. (New) The assembly of claim 49, wherein the first shield has a retention element to enable the first shield and the first medical needle to move relative to each other until the first shield reaches the distal end of the first medical needle.

57. (New) The assembly of claim 49, wherein the second medical needle apparatus further comprises a second shield on the second medical needle, and wherein the first shield has a retention element to enable the first shield to be retained by the second hub until the first medical needle is removed from the second medical needle to enable the first shield to be bound to the first medical needle.

U.S. Patent Application Serial No. 10/580,878
This Response Prepared April 11, 2007
Office Communication Dated March 26, 2007

58. (New) The assembly of claim 49, wherein the hub of the second medical needle apparatus further comprises a hub slot wherein the first medical needle apparatus further comprises a first binding member in the first shield, wherein the first binding member comprises a hub retainer configured to engage the hub slot to retain the second hub to the first shield.

59. (New) The assembly of claim 49, wherein the second medical needle apparatus has a reset surface which cooperates with a component in the first shield of the first medical needle apparatus to unlock the component so that the first shield can be moved from an extended position with the distal end of the first medical needle sheathed to a retracted position on the first medical needle to expose the distal end of the first medical needle.

60. (New) The assembly of claim 49, wherein the second shield is configured to simultaneously sheath the distal end of the first medical needle and the distal end of the second medical needle when the first medical needle is positioned within the second medical needle and the assembly is ready for use.